

**REMARKS**

Claims 1-42 are pending in the present application. Examiner withdrew claims 19-42 from consideration. Claims 1 and 15 were amended to clarify the claim language. Claims 43 and 44 were added. Reconsideration of the claims is respectfully requested.

**I. 35 U.S.C. § 102, Anticipation**

The Examiner has rejected claims 1-18 under 35 U.S.C. § 102(a) as being anticipated by 3G Packet Data Accounting Requirements. Examiner has also rejected claims 1-18 under 35 U.S.C. § 102(a) as being anticipated by Feder et al. (US patent 6,512,754). These rejections are respectfully traversed.

As per claims 1-18, the office action states:

3G Packet Data Accounting Requirements discloses the claimed method of optimizing accounting records which includes detecting a communication link between mobile terminal and host in a packet data network (for example system detects internet access by user) and accumulates, at a packet data serving node disposed between the mobile terminal and the packet data network (data transmitted to PDSN), accounting information relating to a wireless communication network serving the mobile terminal (remote dial-in user service) and the packet data network, the accounting information being used by service providers to generate billing data to minimize the frequency of producing accounting records by the packet data serving node (RADIUS; transmitted to AAA Server, accounting server).

All other claimed limitations are either disclosed or inherent.

Claims 1-18 are rejected under 35 U.S.C. § 102(c) as being anticipated by Feder et al. (US Patent 6,512,754).

Feder et al. discloses the claimed method of optimizing accounting records which includes detecting a communication link between mobile terminal and host in a packet data network (for example system detects internet access by user, for example, see figures 2 and 3) and accumulates, at a packet data serving node disposed between the mobile terminal and the packet data network (for example data transmitted to accounting router, accounting and directory server in figure 2 and server data collector shown in figure 22), accounting information relating to a wireless communication network serving the mobile terminal (remote dial-in user

service) and the packet data network, the accounting information being used by service providers to generate billing data to minimize the frequency of producing accounting records by the packet data serving node (RADIUS; transmitted to customer's billing system).

All other claimed limitations are either disclosed or inherent.

## ANALYSIS

Claim 1, as amended, is reproduced for purposes of discussion:

1. A method to optimize accounting records in a wireless/packet data network, comprising the steps of:

detecting that a communication link has been established between a mobile

terminal and a host in a packet data network; and

accumulating, at a packet data serving node disposed between the mobile terminal and the packet data network, accounting information relating to a wireless communication network serving the mobile terminal and the packet data network, the accounting information being used by service providers to generate billing data to minimize the frequency of producing accounting records by the packet data serving node;

wherein only one start airlink record and only one stop airlink record are sent to the accounting server for a plurality of short data burst transmissions.

Regarding the 3G Packet Data Accounting Requirements reference (hereinafter 3G), Applicant respectfully submits that this reference does not appear to show the limitations of independent claim 1, nor of at least dependent claims 11, 12, and 14. Claim 1 includes the limitation, "wherein only one start airlink record and only one stop airlink record are sent to the accounting server for a plurality of short data burst transmissions." Applicant can not find such teaching anywhere in the cited reference. In fact, 3G teaches away from the presently claimed invention since 3G teaches that UDRs are triggered by any given short data burst (*see* Table 1, page 4 of 3G). This indicates that the PSDN of the 3G reference sends the accounting information to the accounting server at the receipt of each short data burst, and not the accumulation of a plurality of short data

bursts before transmitting such accounting information (thus reducing the number of start and stop records required to be sent to the accounting server), as claimed. *See In re Hedges*, 228 U.S.P.Q. 685 (Fed. Cir. 1986). Absent the Examiner pointing out some teaching or inventive to implement accumulation of accounting information in a number of short data bursts and accompanying reduction of start/stop records sent, one of ordinary skill in art would not be led to modify 3G to reach the present invention when the reference is examined as a whole.

This limitation of the present claims is discussed in part in the present specification, for example, at page 19-20:

**Figure 10** illustrates a preferred embodiment of the present invention in which short data bursts (SDBs) are accumulated over an interval. As shown in **Figure 10**, the mobile station (MS) is initially dormant (T1). Thereafter, data is received by the data network and sent to the wireless communication network. The total number of octets received is then incremented in the accounting controller (T2). The data received is sent to the mobile station as a first short data burst. While the first short data burst is being sent, more data is received by the data network and sent to the wireless communication network. The total number of octets received is incremented in the accounting controller by the amount of the received data (T3).

A second SDB is transmitted to the MS. An airlink record identifying the transmission of the first SDB is sent by the wireless communication network to the accounting controller. The accounting controller increments the number of SDBs by 1 and the total number of SDB octets by the number of octets in the first SDB. Meanwhile, more data is being received by the data network and sent to the wireless communication network. The total number of octets received is then incremented by the number octets in the second set of received data (T4).

The third set of data is transmitted as a third SDB to the MS. An airlink record identifying the transmission of the second SDB is sent by the wireless communication network to the accounting controller. The accounting controller increments the number of SDBs by 1 and the total number of SDB octets by the

number of octets in the second SDB. Meanwhile, more data is being received by the data network and sent to the wireless communication network. The total number of octets received is then incremented by the number of octets in the third set of received data (T5).

An interim timer expires (T6). This is a configurable timer the operator sets to make sure accounting data does not "sit too long" in the bridge server 150 without being sent to the accounting server 160. This avoids the case where the bridge server 150 goes down and all unsent accounting data would be lost. With the present invention after a certain interval, the interim timer fires to make sure a snapshot of the accounting data is sent to the accounting server 160.

The wireless communication network sends an airlink record identifying the transmission of the third SDB. The accounting controller increments the number of SDBs by 1 and the total number of SDB octets by the number of octets in the third SDB. Meanwhile, more data is being received by the data network and sent to the wireless communication network. The total number of octets received is then incremented by the number of octets in the fourth set of received data (T7).

Because the fourth set of received data meets a predetermined criteria, it is assumed that the wireless communication network activates the traffic channel for transmission to the mobile station. As a result, an active start airlink record is sent to the accounting controller. Meanwhile more data is being received in the data network for transmission to the mobile station. A start record is sent to the accounting server identifying the number of SDBs, total number of SDB octets and the octet count. The octet count is then incremented by the number of octets received (T8).

Transmission of data to the mobile station is then over an active traffic channel until the mobile station goes dormant. At this time, an active stop airlink record is sent from the wireless communication network to the accounting controller. The accounting controller sends a stop record to the accounting server identifying the number of SDBs, total number of SDB octets and the octet count. This information is sent again since the stop record must be cumulative and

contain all the information since the start record. In other words, the start record opens an accounting entry and the stop record reports all the final counts. The total number of SDBs, SDB octets and the octet count are then cleared (Tn).

Thus, with the present invention, the number of messages sent to the accounting server is minimized by accumulating short data burst information over an interval containing a plurality of short data bursts. Thus, rather than sending eight accounting messages to the accounting server in the above example, only four messages are sent, thereby reducing the number of required accounting messages to half.

[Emphasis added.]

Since the 3G reference does not appear to teach the claimed limitations of at least claim 1, the rejection of claim 1 based on the 3G reference is believed overcome.

Examiner also rejects all pending claims (1-18) over the Feder reference. It is respectfully submitted that the Feder reference does not show the limitations of claim 1 as amended. Though Examiner points to a data network and wireless network, the accumulation of short data bursts before transmitting accounting information is not shown or pointed out in the cited reference. If Applicant has overlooked a relevant teaching, it is respectfully submitted that such teaching be pointed out with particularity.

In rejecting claims 1-18 over Feder, Examiner broadly points to Figures 2, 3, and 22. Figure 2 shows the remote access architecture of the Feder reference. The description of Figure 2, however, does not appear to teach the accumulation of accounting information including multiple short data bursts, in the context of claim 1 of the present application. Likewise, neither Figures 3 nor 22 appear to teach this limitation. If Applicant has overlooked a relevant teaching, it is respectfully requested that such teaching be pointed out with particularity.

For the above reasons, it is believed that the rejections of claims 1-18 have been overcome.

New claim 43 includes the limitation, "wherein the stop record send to the accounting server includes the number of short data bursts, the total number of short data

burst octets, and the octet count, for the plurality of short data burst transmissions." This limitation is not shown in the cited references, in the context of the present application. Consideration of new claim 43 is respectfully requested.

Further, Applicant respectfully submits that the rejections offered by the Examiner do not meet the requirements of 37 CFR 1.104(c)(2) for two reasons. First, the limitations of claims 2-18 have not been recited by the Examiner as shown by the cited references. Instead of pointing to the specific parts of the cited references as teaching the specific limitations of each of each of these claims, Examiner says that they are "either disclosed or inherent." A prior art reference anticipates the claimed invention under 35 U.S.C. § 102 only if every element of a claimed invention is identically shown in that single reference, arranged as they are in the claims. *In re Bond*, 910 F.2d 831, 832, 15 U.S.P.Q.2d 1566, 1567 (Fed. Cir. 1990). All limitations of the claimed invention must be considered when determining patentability. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031, 1034 (Fed. Cir. 1994). In the present case, Examiner has not shown that every element of claims 2-18 are shown in the cited references. One function of the *prima facie* burden is to require the Patent Office to set forth specific objections, which can be met by the applicant, and not just make general rejections. *In re Epstein*, 32 F.3d 1559, 31 U.S.P.Q.2d 1817, 1820 (Fed. Cir. 1994) (Plager, J., concurring). "The Examiner cannot sit mum, leaving the applicant to shoot arrows into the dark hoping to somehow hit a secret objection harbored by the Examiner." *In re Oetiker*, 977 F.2d 1443, 24 U.S.P.Q.2d 1443, 1447 (Fed. Cir. 1992) (Plager, J., concurring). Applicants respectfully request, under 37 C.F.R. § 1.104(c)(2), that the Examiner point out the particular portion of the cited references relied on since at least the Feder reference is a complex reference including 37 Figures and 48 columns of text. Likewise, the 3G reference includes technical specifications not clearly described. If Examiner relies on a particular portion of the 3G reference in rejecting claims 2-18, it is respectfully requested that such teaching be pointed out with particularity.

Second, it is respectfully submitted that the Examiner has misapplied the concept of "inherent" anticipation. Section 102 of Title 35 deals with novelty and loss of patent rights. An invention is said to be "anticipated" when it is squarely described or disclosed in a single reference as identified from one of the categories of 35 U.S.C. § 102,

commonly referred to as "prior art". Express anticipation occurs when the invention is expressly disclosed in the prior art, patent or publication. In some cases, however, when the claimed invention is not described *in haec verba*, the "doctrine of inherency" is relied on to establish anticipation. Under the principles of inherency, a claim is anticipated if a structure in the prior art necessarily functions in accordance with the limitations of a process or method claim. *In re King*, 801 F.2d 1324, 231 U.S.P.Q. 136 (Fed. Cir. 1986). A prior art reference that discloses all of a patent's claim limitations anticipates that claim even though the reference does not expressly disclose the "inventive concept" or desirable property the patentee discovered. *Verdant Brothers, Inc. v. Union Oil Company of California*, 814 F.2d 628, 2 U.S.P.Q.2d 1051, (Fed. Cir. 1987). It suffices that the prior art process inherently possessed at that property. *Id.* Mere possibilities or even probabilities, however, are not enough to establish inherency. The missing claimed characteristics must be a "natural result" flowing from what is disclosed. *Continental Can Co. v. Monsanto Co.*, 948 F.2d 1264, 20 U.S.P.Q.2d 1746 (Fed. Cir. 1991). Unstated elements in a reference are inherent when they exist as a "matter of scientific fact". *Constant v. Advanced Micro-Devices, Inc.*, 848 F.2d 1560, 7 U.S.P.Q.2d 1057 (Fed. Cir.), *cert. denied*, 488 U.S. 892 (1988) and *Hughes Aircraft Co. v. United States*, 8 U.S.P.Q.2d 1580 (Cl. Cl. 1988). Otherwise, the invention is not inherently anticipated.

Applied to the current rejections, it is respectfully submitted that the claimed limitations of claims 2-18 do not fulfill the above stated requirements of inherency. For example, it is not established that the cited references necessarily function such that accounting information including a number of short data bursts is accumulated at a PDSN.

For the aforementioned reasons, it is respectfully submitted that the present claims are distinguished from the cited references.

Regarding the dependent claims 11, 12, and 14, at least these claims are also believed allowable on their own merit. For example, neither of the cited references appears to teach the claimed limitations of, "wherein the accounting information is accumulated over a series of active traffic channel transmissions," as claimed in claim 12. Likewise, claim 14's limitation of, "wherein the number of octets of data received from the mobile terminal and the number of octets sent to the mobile terminal further includes

the number of octets received from the mobile terminal in the form of short data bursts and the number of octets sent to the mobile terminal in the form of short data bursts.”

Such limitations have not been cited or found in the cited references.

It is therefore respectfully submitted that all claims are distinguished from the cited references. Reconsideration of the claims is respectfully requested.

## II. Conclusion

It is respectfully urged that the subject application is patentable over the cited references and is now in condition for allowance.

The Examiner is invited to call the undersigned at the below-listed telephone number if in the opinion of the Examiner such a telephone conference would expedite or aid the prosecution and examination of this application.

DATE: 6.26.03

Respectfully submitted,



Patrick C. R. Holmes  
Reg. No. 46,380  
Carstens, Yee & Cahoon, LLP  
P.O. Box 802334  
Dallas, TX 75380  
(972) 367-2001  
Attorney for Applicants